Abstract

A multi-port network communication device includes a plurality of ports for the reception and transmission of addressed data packets which include media access control address data, a forwarding mechanism for directing packets received at any of said plurality of ports to at least one of the plurality of ports, a memory for the selectively controllable storage of permitted media access control addresses, and means for restricting forwarding of packets from the device in response to an examination of media access control data in said packets and said permitted media access control addresses.

The forwarding of a unicast packet having a source address and a destination address is prevented when neither of those addresses in the unicast packet corresponds to a permitted media access control address. The forwarding mechanism prevents the forwarding of multicast or broadcast packets to ports which are not connected to devices having permitted media access control addresses.